

## **BARBARA K. BURIAN, Ph.D.**

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### **EDUCATION AND CREDENTIALS**

- Ph.D. 1990            Southern Illinois University at Carbondale  
Psychology, With Honors  
Minor: Psychological Assessment
- M.A. 1987            Southern Illinois University at Carbondale  
Psychology  
Phi Kappa Phi
- B.S. 1983            The Ohio State University, Columbus, Ohio  
Early and Middle Childhood Education  
Cum Laude

Fellow, Royal Aeronautical Society.  
FAA Certificated Private Pilot – Single Engine, Land  
Licensed Clinical Psychologist (#071-004649) – Illinois  
NASA Exceptional Service Medal - 2013

### **PROFESSIONAL EXPERIENCE**

- 2007-present            Senior Research Psychologist  
Human System Integration Division, NASA Ames Research Center,  
Moffett Field, California.

Lead research team, develop technologies, and conduct research pertaining to cognitive demands, resource management, and human performance under stress in technically advanced aircraft and medical settings during normal and non-normal conditions through laboratory and simulator studies, field observations, and analysis of incident and accident reports. Conduct research pertaining to design and functionality of paper and electronic checklists and procedures and human error in their execution and provide consultation to a wide range of individuals, companies, agencies, hospitals, and academia regarding checklist design and use in aviation and medicine. Develop prototypes of electronic procedure systems; conduct research on the design and development of dynamic electronic operating documents. Serve as human factors engineer member of NASA Mishap Investigation Boards;

provide NASA Mishap Investigation Training; write technical papers and reports; serve as peer reviewer of technical reports submitted to professional journals and conferences (e.g., Aviation, Space, and Environmental Medicine Journal; Human Computer Interaction-Aeronautics Conference), present papers at national and international meetings and conferences; participate in NASA program planning activities; prepare monthly and milestone progress reports; manage budget; and collaborate with academia and aviation and medical communities.

- 2016-Present      Member.  
Emergency Manual Implementation Collaborative (EMIC) Steering Committee (Medical emergency manuals)
- 2016-Present      Co-Editor (with Keith Ruskin, MD)  
Anesthesia Illustrated Book Series. Oxford University Press.
- 2016-Present      Member.  
I-Care Committee. EPIC Electronic Health Records. (Development and integration of medical critical event response guides into EPIC EHR systems)
- 2014-Present      Member.  
Society for Pediatric Anesthesiology, Quality and Safety Committee
- 2005-Present      Member.  
Communication, Navigation, and Surveillance Task Force, and Pilot-Controller Procedure Synchronization Initiative Working Group.
- 2016                 Member.  
United States Air Force, NDTA-MAAC Pilot Monitoring Subcommittee.
- 2015                 Member.  
Flight Path Management Steering Committee, Delta Airlines.
- 2012-2014         Member.  
Aviation Industry-Government Human Factors Roundtable, and Active Pilot Monitoring Working Group.
- 2010-2013         Member.  
FAA Human Factors Research, Engineering, and Development Advisory Committee
- 2010-2013         Member.  
National Aeronautics and Space Administration and Federal Aviation Administration Work Group: Cross-Agency Human-Centered Design Research Plan Development and Implementation

2009-2013

NASA-FAA Liaison for NextGen Flight Deck Human Factors Research  
Human System Integration Division, NASA Ames Research Center,  
Moffett Field, California.

Developed umbrella interagency agreements (IAA) between NASA and the FAA; assisted in the preparation of documents for the completion of NASA's pursuits registry process and addition of new work and modifications to the IAAs, worked closely with FAA Contracts and NASA Reimbursable Funding Offices to track interagency agreement, modification, and annex approval. Prepared reimbursable budgets and Inter-governmental Cost Estimates for proposed work and tracked status of funding for all work. Total value of umbrella agreements was \$19 M. Identified pertinent NASA and NASA-sponsored research for FAA Human Factors Research and Engineering personnel; analyzed FAA NextGen concepts of operation and planning documents and NASA aeronautics research plans and identified synergies and divergences between NASA and FAA NextGen human factors research plans, goals, and specific research efforts; mapped FAA NextGen Flight Deck Human Factors research topics against NASA program research milestones; facilitated communication between NASA researchers and FAA NextGen Flight Deck Human Factors Research sponsors; assisted NASA researchers develop proposals for FAA-sponsored NextGen Flight Deck Human Factors Research.

2009-2010

Technical Area Coordinator for Project 5 - Automation Roles and Responsibilities, FAA NextGen Flight Deck Human Factors Research  
Human System Integration Division, NASA Ames Research Center,  
Moffett Field, California.

Assisted in identifying appropriate researchers within the aviation community to complete research tasks within Project 5; provided guidance and feedback relative to the development of project research proposals; participated in kick-off meetings and regular review meetings held by researchers performing tasks in Project 5; tracked progress on technical work and completion of tasks and deliverables; identified relationships and interdependencies within Project 5 tasks and other flight deck human factors research, facilitated collaboration among Project 5 researchers; assisted in troubleshooting problems that arise in the technical completion of Project 5 work; participated in planning meetings with FAA Project 5 research sponsors as appropriate; and made recommendations regarding future work that was needed in the area and priorities for that work.

2007-2009

Project Scientist  
Integrated Intelligent Flight Deck Technologies Project, Aviation Safety  
Program, NASA

Served as liaison with civil aviation groups, organizations, agencies, and industry (e.g., FAA, NTSB, Boeing, Air Carriers, etc.); coordinated IIFD/Aviation Safety and FAA Office of Human Factors Engineering NextGen Research; helped to coordinate human factors research across

NASA ARMD projects; coordinated and led IIFD-Flight Deck Research Working Group; served on FAA/Eurocontrol Action Plan 15 (AP15) committee and on FAA Human Factors Tiger Team; wrote, reviewed and recommended selection of NRA and SBIR announcements and proposals; contributed to development of Project Technical Plans, research emphases, project re-structuring, and distribution of Project resources; reviewed yearly task plans; provided feedback to Project researchers on their work; participated in regular project and program meetings, teleconferences, and technical reviews; prepared monthly reports; other program management duties as assigned.

- June 2003      Symposium Chair and Organizer  
International Symposium on Emergency and Abnormal Situations in Aviation, Emergency and Abnormal Situations Project, NASA Ames Research Center, Santa Clara Convention Center, Santa Clara, California
- 2002 – 2007      Member.  
International Civil Aviation Organization (ICAO) Flight Safety and Human Factors Study Group
- 2000-2007      Senior Research Associate and Study Director  
San Jose State University at NASA Ames Research Center, Moffett Field, California.
- Directed Emergency and Abnormal Situations Study and supervised work conducted by study team; participated in NASA program planning activities and prepared budget; prepared monthly and milestone progress reports; conducted field observations; conducted laboratory research; performed analysis of aviation incident and accident reports, paper checklists, and electronic procedure systems; developed prototypes of electronic procedure systems; with a team developed web-based training and computer-based training software; served as human factors engineer consultant to NASA Mishap Investigation Boards; wrote technical papers and reports; presented papers at national and international meetings and conferences; and provided extensive consultation to and collaborated with aviation industry.
- 1999 & 2000      NASA/ASEE/Stanford/San Jose State University Summer Faculty Fellow  
NASA Ames Research Center, Moffett Field, California
- Worked collaboratively with NASA Civil Servants on designing and conducting research projects in Aviation Safety Human Factors. Wrote reports of results and presented findings at industry conferences. Evaluated computer-based training materials developed for pilot icing weather training, consulted with other NASA researchers on studies and projects.
- 1998-2000      Director of Practica and Internships  
University of Baltimore, Department of Psychology, Baltimore, Maryland

Taught graduate courses in the department of psychology, curriculum development, student advising, community outreach to develop practica and internship sites, supervised students completing practica and internships, conducted research in aviation human factors, supervised research assistants, wrote and managed grants and contracts from outside funding sources.

1993-1998

Associate Professor, Psychology Program Director

St. Thomas University, Miami, Florida

1995 Faculty Professional Development Award Recipient

Taught courses at the graduate and undergraduate levels, performed extensive administrative duties including developing and managing program budget, conducting biweekly faculty meetings, hiring and supervising adjunct faculty, curriculum development and determining class schedules, student advisement, responding to student grievances and initiating student disciplinary actions within the program, served on numerous university committees, vice-president of the faculty senate.

1990-1993

Clinical Counselor (Staff Psychologist), Clinical and Outreach Supervisor  
Counseling Center, University of Illinois at Urbana-Champaign

Provided psychological counseling services to university students, faculty, and staff, conducted intake appointments, member of crisis/suicide response team, directed treatment team for clients from severely dysfunctional families (e.g., suicide or murder within family, incest, etc.), consultation and outreach to university community, provided supervision to interns and practicum students, specialties in post traumatic stress disorder and physical disability.

## **MISHAP AND ACCIDENT INVESTIGATION EXPERIENCE AND TRAINING**

- 2009                      Witness. Provided expert testimony at the National Transportation Safety Board Public Hearing into the U.S Airways 1549 Accident: Dual Engine Failure and Ditching into the Hudson River. Washington, D.C. June.
- 2007                      Instructor. *Checklists, Procedures, and Mishaps*. NASA Mishap Investigation Training Symposium, Kennedy Space Center, Merritt Island, Florida, March.
- 2006                      Aviation Accident Investigation Course, National Transportation Safety Board, Washington, DC, April.
- 2005                      Fire and Explosion Accident Investigation Course, Southern California Safety Institute, Albuquerque, New Mexico, August.
- 2005-2006              NASA, CDRA Pre-Cooler Mishap Investigation, Human Factors Consultant, July – July.

- 2005 NASA, SOFIA Project Mishap Investigation, Human Factors Consultant, July.
- 2005 Mishap Investigation Training. NASA, July.
- 2004 System Safety Seminar: Introduction to Accident and Mishap Investigation Techniques, NASA, December.

## **NASA INVENTION DISCLOSURES**

- 2017 Flight Status Indicator (FSI) and Flight Control Panel (FCP), (ARC pending) – autoflight display and interface, integrating relevant information from across the flight deck (e.g., FMS, crew alerting system)
- 2017 Quick Call (ARC 17995-1) – application (app) for quickly requesting, documenting, and tracking requests for supplies, drugs, equipment, help, or calling a “Code Blue” in medical settings (with Drs. Clebone and Ruskin, University of Chicago, and Dr. Key Dismukes, Dismukes Consulting, LLC)
- 2015 Dynamic Information Management System (DIMS; now: Flight, Automation, and Information Management (FAIM) System), (ARC 17714-1) – a comprehensive, integrated, and dynamic electronic procedure system that is context sensitive
- 2015 Procedural Mapping (ARC 17613-1) – a unique graphical method for depicting and analyzing procedures across multiple operational domains
- 2013 Dynamic, Constraint-Based Checklists (ARC 17241-1) – an innovative approach to adapt checklist content to unanticipated events in real-time.

## **GRANTS AND CONTRACTS**

- 2012-2013 Principal Investigator  
Federal Aviation Administration-NASA Inter Agency Agreement, “Flight Crew Workload Management in Non-normal Situations under NextGen: Phase 1”
- 2009-2012 Principal Investigator  
Federal Aviation Administration-NASA Inter Agency Agreement, “Navigation Reference System Waypoint Study, Phase 1 and 2”
- 2008-2012 Principal Investigator  
Federal Aviation Administration-NASA Inter Agency Agreement,

“Single pilot workload in very light jets”

- 2000-2002      Principal Investigator  
Federal Aviation Administration, “General Aviation Pilot Weather Knowledge and Training” FAA Grant #00-G-020
- 1999            Contractor  
Aircraft Owners and Pilots Association, “Vacuum pump failures in general aviation aircraft - development of research study design and budget”
- 1995-1998      Principal Investigator (and Grant Coordinator)  
Internal Grant, St. Thomas University, Miami, Florida  
“STU Research Associates – development of a state-of-the-art research training lab”

## **SOFTWARE AND MULTIMEDIA DEVELOPMENT**

*SLD Icing.* (2003). Reviewer and consultant for video development team at NASA Glenn Research Center.

*A Pilot’s Guide to In-flight Icing.* (2001-2002). Member of CBT development team with other members from NASA Glenn Research Center, NASA Ames Research Center, University of Oregon, and members of the Aviation Community.

*Icing for General Aviation Pilots.* (2001). Reviewer and consultant for video development team at NASA Glenn Research Center.

*Icing for Regional and Corporate Pilots.* (2000-2001). Reviewer and consultant for CD development team at NASA Glenn Research Center.

## **COLLABORATION AND CONSULTATION**

### **Agencies, Companies, Universities, Associations:**

Aviation/Space: Forty-seven North American, European, and Asian Air Carriers, Aircraft Owners and Pilots Association, Airservices Australia, Air Transport Association, AvWeb, Boeing, Bombardier, Eclipse Aviation/United Services, Embry Riddle Aeronautical University, Federal Aviation Administration, Honeywell, International Civil Aeronautical Organization, International Federation of Air Line Pilots Associations, NASA Engineering and Safety Center, NASA Flight Operations Risk Assessment Program, NASA Johnson Space Center, National Transportation Safety Board, NetJets, United States Air Force, BAE Systems.

Medical: University of Chicago Department of Anesthesiology and Critical Care, Stanford University Anesthesia Cognitive Aid Group, European Society of Anaesthesiology, University of California-San Francisco Department of Anesthesia and Perioperative Care, Everett Washington Emergency Medical Services, University of Michigan School of Dentistry

Other: New York City Office of Health and Mental Hygiene-Emergency Preparedness and Response, Swift Tram

### **Selected Topics:**

Human factors engineering; human performance and error; emergency response and evacuation, electronic flight bags; aeronautical emergency and abnormal checklist development, design, content and use; medical time-out and critical event checklists and emergency manual development, design, content, and use; normal checklists and procedures for flight crews; emergency and abnormal checklists and procedures across high risk industries; CRM and single-pilot resource management training; general aviation safety and training; space shuttle recurring anomalies; flight safety survey development, industry standards for smoke, fire, and fumes checklists.

### **PAPERS AND PUBLICATIONS**

Burian, B.K., Clebone, A., Dismukes, R.K., Ruskin, K.J. (in press). More than a tick box: Medical checklist development, design, and use. Special Article. *Anesthesia and Analgesia*.

Burian, B.K., Mosier, K.L., Fischer, U., & Kochan, J.A. (in press). New teams on the flight deck: Humans and context-sensitive information automation. In E. Salas & F. Jentsch (Eds.) *Human Factors in Aviation*, 3<sup>rd</sup> edition. New York: Academic Press.

Mosier, K.L., Fischer, U., Burian, B.K., & Kochan, J.A. (in press). *Autonomous, context-sensitive, task management systems and decisions support tools I: Human-automation teaming fundamentals and state of the art*. NASA Technical Memorandum.

Burian, B.K., Kochan, J.A., Mosier, K.L., & Fischer, U. (in press). *Autonomous, context-sensitive, task management systems and decisions support tools II: Contextual constraints and information sources*. Manuscript in preparation.

Berman, B., Kochan, J. A., Burian, B. K., Pruchnicki, S., Christopher, B., & Silverman, E. (in press). *Alerts and cues on the flight deck: Analysis and application in training*. NASA Technical Memorandum.

Clebone, A., Burian, B.K., Watkins, S., Galvez, J., Lockman, J., Heitmiller, E. and the Members of the Society for Pediatric Anesthesia Quality and Safety Committee. (2017). The development and implementation of cognitive aids for critical events in pediatric anesthesia: The Society for Pediatric Anesthesia Critical Events Checklists. *Anesthesia*



- and Analgesia*. 124(3), 900-907. doi: 10.1213/ANE.0000000000001746.
- Clebone, A., Burian, B.K., & Polaner, D.M (2017). A timeout checklist for pediatric regional anesthetics. *Regional Anesthesia and Pain Medicine*, 42(1), 105-108. doi: 10.1097/AAP.0000000000000509.
- Burian, B. K., Clebone, A., Dismukes, R.K., & Ruskin, K. (2017). More than a tick box: Medical checklist development, design, and use. Submitted for review.
- Clebone, A., & Burian, B.K. (Eds.) (2017). *Pediatric Anesthesia Procedures Illustrated*, Oxford University Press (in preparation).
- Stripling, M., Stimmler, C., Hinderaker, C., Burian, B., & Porter, M. (2017). Decision making in the first hours of disaster response: Lessons from the New York City Threat Response Guides. Manuscript in preparation.
- Burian, B.K. (2016, May). Checking the checklists. *AeroSafety World*. Flight Safety Foundation.
- Burian, B.K. (2016). Integrated checklists for un-alerted smoke, fire, and fumes: Adherence to guidance from the industry. *NASA Technical Memorandum*, NASA/TM—2016-219109.
- Flight Path Management Steering Committee (2015). *Final Report and Recommendations of the Flight Path Management Steering Committee*. Delta Airlines Technical Report.
- Burian, B. K. (2015). Un-alerted smoke and fire: Checklist content and intended crew response. In *Proceedings of the 18<sup>th</sup> International Symposium on Aviation Psychology*. Dayton, OH: Wright State University.
- Active Pilot Monitoring Working Group. (2014). *A Practical Guide to Improving Flight Path Monitoring*. Flight Safety Foundation.
- Burian, B. K. (2014). Factors affecting the use of emergency and abnormal checklists: Implications for current and NextGen operations. *NASA Technical Memorandum*, NASA/TM—2014-218382.
- Berman, B., Kochan, J. A., Burian, B. K., Pruchnicki, S., Silverman, E., & Christopher, B. (2014). Flight deck alerting: Functions, characteristics, and implications for NextGen. Technical Report Prepared for the Federal Aviation Administration.
- Williams, K., Christopher, B., Drechsler, G., Pruchnicki, S., Rogers, J., Silverman, E., Gildea, K., Burian, B. K., & Cotton, S. (2014). Aviation human-in-the-loop simulation studies: Experimental planning, design and data management. *NASA Technical Memorandum*, NASA/TM—2014-218307.

- Christopher, B., Pruchnicki, S., Burian, B. K., & Cotton, S. (2014). Enhancing NextGen RNAV capabilities: Human performance evaluation of NRS waypoint nomenclatures. *International Journal of Aviation Psychology*, 24(3), 155-171.
- Kochan, J. A., Tomko, L., & Burian, B. K. (2014). Anticipated operational anomalies under NextGen. Technical Report Prepared for the Federal Aviation Administration.
- Burian, B. K., Christopher, B., Fry, D., Pruchnicki, S., & Silverman, E. (2013). Jet single-pilot simulation study scenario overviews, task analyses, and concurrent task timelines. *NASA Technical Memorandum*, NASA/TM-2013-216608.
- Burian, B. K., Pruchnicki, S., & Fry, D. (2013). Entry-level jet single-pilot human-in-the-loop simulation research: Study scripts and radio background chatter dialogue. *NASA Technical Memorandum*, NASA/TM-2013-216575.
- Burian, B. K., Pruchnicki, S., Rogers, J., Christopher, B., Williams, K., Silverman, E., Drechsler, G., Mead, A., Hackworth, C., & Runnels, B. (2013). Single-pilot workload management in entry-level jets. *NASA Technical Memorandum*, NASA/TM-2013-216557.
- Burian, B. K., Pruchnicki, S., Christopher, B., Silverman, E., Hackworth, C., Rogers, J., Williams, K., Drechsler, G., Runnels, B., & Mead, A. (2013). Single-Pilot workload management during cruise in entry level jets. In Proceedings of the 17<sup>th</sup> International Symposium on Aviation Psychology. Dayton, OH: Wright State University.
- Burian, B. K. (2011). *Bombardier Challenger 605 Quick Reference Handbooks, Volumes 1 and 2: Handbook and emergency and abnormal checklist design and usability review and analysis*. Technical Report.
- Burian, B. K., Pruchnicki, S., & Christopher, B. (2011). Designing realistic full mission human-in-the-loop aviation simulation studies: Lessons learned. In *Proceedings of the Human Factors and Ergonomic Society 55<sup>th</sup> Annual Meeting*. Las Vegas, NV: HFES.
- Burian, B. K., Christopher, B., Pruchnicki, S., & Cotton, S. (2011). *Human Factors Evaluation of the Implementation of the Navigation Reference System (NRS), Phase 2 Final Report*. Technical Report for the Federal Aviation Administration.
- Pruchnicki, S., Christopher, B., & Burian, B. K. (2011). Human factors issues of navigation reference system waypoints. In *Proceedings of the 16<sup>th</sup> International Symposium on Aviation Psychology*. Dayton, OH: Wright State University.
- Burian, B. K., & Martin, L. (2011). Operating documents that change in real-time: Dynamic documents and user performance support. In G. Boy (Ed.), *Handbook of human-machine interaction, 2<sup>nd</sup> edition*. Farnham, Surrey, England: Ashgate.
- Dismukes, R. K., and Burian, Barbara K. (2010). Testifying at NTSB public hearings. *Ergonomics and Design*, 18(2), 28-30.

- Burian, B. K., Pruchnicki, S., & Christopher, B. (2010). *Human Factors Evaluation of the Implementation of the Navigation Reference System (NRS), Phase 1 Final Report*. Technical Report for the Federal Aviation Administration.
- Burian, B. K., & Feldman, J. (2009). Certified flight instructor weather training: Perspectives and practices. *International Journal of Aviation Psychology, 19*(3), 217-234.
- Burian, B. K., & Dismukes, R. K. (February, 2009). Single-pilot VLJ operations. *The Aerospace Professional*, pg. 17. London: Royal Aeronautical Society.
- Burian, B.K. (2008). Perturbing the system: Emergency and off-nominal situations under NextGen. *International Journal of Applied Aviation Studies, 8*(1), 114-127.
- Burian, B. K., & Dismukes, R. K. (2007, November). Alone at 41,000 feet: Single-pilot operations in technically advanced aircraft. *Aero Safety World*, pp. 30-34.
- Burian, B. K. (2007). Very Light Jets in the National Airspace System. In *Proceedings of the 14<sup>th</sup> International Symposium on Aviation Psychology*. Dayton, OH.
- Burian, B. K. (2006). Aeronautical emergency and abnormal checklists: Expectations and realities. In *Proceedings of the Human Factors and Ergonomics Society 50<sup>th</sup> Annual Meeting*, San Francisco.
- Burian, B. K. (2006). Design guidance for emergency and abnormal checklists in aviation. In *Proceedings of the Human Factors and Ergonomics Society 50<sup>th</sup> Annual Meeting*, San Francisco.
- Burian, B. K. (2006). Smoke, Fire, and Fumes! *ISASI Forum, 39*, pp.14-18.
- Burian, B. K., Barshi, I., & Dismukes, K. (2005). Many factors affect crew effectiveness in handling emergency or abnormal situations. *ICAO Journal, 60*, pp. 16-18, 31-32.
- Burian, B. K. & Boorman, D. J. (2005). *Boeing non-normal checklists: The Boeing 777 electronic checklist and quick reference handbook (2<sup>nd</sup> edition)*. Technical Document. Boeing Commercial Airplane Group.
- Burian, B. K. (2005). Do you smell smoke? Issues in the design and content of checklists for smoke, fire, and fumes. In *Proceeding of the International Society of Air Safety Investigators 2005 Conference*. Fort Worth, TX: ISASI.
- Burian, B. K., Barshi, I., & Dismukes, K. (2005). The challenge of emergency and abnormal situations. *NASA Technical Memorandum 2005-213462*. Moffett Field, CA: NASA Ames Research Center.

- Burian, B. K. (2004). Emergency and abnormal checklist design factors influencing flight crew response: A case study. In Helen Wilson (Ed.) *Proceedings of the International Conference on Human-Computer Interaction in Aeronautics 2004*, Toulouse, France: EURISCO International.
- Burian, B. K. & Boorman, D. J. (2004). *Boeing non-normal checklists: The Boeing 777 electronic checklist and quick reference handbook*. Technical Document. Boeing Commercial Airplane Group.
- Burian, B. K., Boorman, D. J., Kowalski, T., & Geven, R. (2004). *The process of the Boeing 777 electronic checklist and quick reference handbook development*. Technical Document. Boeing Commercial Airplane Group.
- Burian, B. K., Dismukes, R. K., & Barshi, I. (2003). The emergency and abnormal situations project. In T. McCarthy (Ed.), *Proceedings of the International Society of Air Safety Investigators 2003 Conference*. Washington, D.C.: ISASI.
- Burian, B. K., & Barshi, I. (2003). Emergency and abnormal situations: A review of ASRS reports. In R. Jensen (Ed.) *Proceedings of the 12<sup>th</sup> International Symposium on Aviation Psychology*. Dayton, Ohio: Wright State University Press.
- Burian, B. K. (2002). *General aviation pilot weather knowledge and training. FAA Grant #00-G-020, Final Report*. Federal Aviation Administration, Washington, DC.
- Burian, B. K. (2001). Student pilot training regarding weather. In R. Jensen (Ed.) *Proceedings of the 11<sup>th</sup> International Symposium on Aviation Psychology*. Columbus, Ohio: The Ohio State University.
- Orasanu, J., Burian, B. K., & Hitt, J. (2001). Plan continuation errors in pilot weather-related decisions. In R. Jensen (Ed.) *Proceedings of the 11<sup>th</sup> International Symposium on Aviation Psychology*. Columbus, Ohio: The Ohio State University.
- Burian, B. K. (2000). Design flaws in pilot decision making CBTs. In *Proceedings of the 19<sup>th</sup> Digital Avionics Systems Conference*, Philadelphia, Pennsylvania.
- Burian, B. K., Orasanu, J., & Hitt, J. M. (2000). Plan continuation errors: A factor in aviation accidents? In *Proceedings of the International Ergonomics Association 14<sup>th</sup> Triennial Congress and Human Factors and Ergonomics Society 44<sup>th</sup> Annual Meeting*, San Diego, California.
- Burian, B. K., & O'Connor Slimp, P. A. (2000). Social dual role relationships during internship: A decision making model. *Professional Psychology: Research and Practice*, 31, 332-338.
- Burian, B. K., Yanico, B. J., & Martinez, C. R., Jr. (1998). Group gender composition effects upon judgments of sexual harassment. *Psychology of Women Quarterly*, 22, 465-480.

O'Connor Slimp, P. A., & Burian, B. K. (1994). Dual role relationships during internship: Consequences and recommendations. *Professional Psychology: Research and Practice*, 25, 39-45.

Burian, B. K. (1993). *University of Illinois Counseling Center: Meeting the accommodation needs of students with physical disabilities*. Technical Report.

Burian, B. K. & Lyn, L. (1993). Counseling center accessibility for physically disabled students. Paper presented at the *Third Annual Midwestern Conference on Diversity Issues and the Role of Counseling Centers*, Champaign, Illinois.

Burian, B. K. (1991). Group composition and judgments of sexual harassment. *Dissertation Abstracts International*, 52(5), 2818B. (University Microfilms No. AAD 91-29802)

Burian, B. K. (1987). *The impostor phenomenon and achievement*. Unpublished Master's Thesis, Southern Illinois University, Carbondale, Illinois.

## PRESENTATIONS

Clebhone, A., & Burian, B.K. (2017). *Can cognitive aids and checklists make medicine safer?* Aerospace Medical Association 88<sup>th</sup> Annual Scientific Meeting. Denver, CO.

Burian, B.K. (2016). *Checklist development: Optimizing for the medical environment*. Aerospace Medical Association 87<sup>th</sup> Annual Scientific Meeting. Atlantic City, NJ.

Burian, B. K. (2015). Human factors in aviation—the good, the bad, and the ugly: Some lessons from NASA for medicine. Grand Rounds Lecture, University Hospital, Case Western Reserve University, Cleveland, Ohio.

Burian, B. K. (2014). Single pilot operations and non-normal situations. Human Computer Interaction-Aero 2014 Conference, Santa Clara, California.

Burian, B. K. (2013). Memory Items, Quick Action Indexes, and Quick Reference Cards. Delta Air Line Pilots Association Master Executive Council, 2013 Central Air Safety Committee Spring Workshop, Atlanta, Georgia.

Rogers, J., Williams, K., Hackworth, C., Burian, B. Pruchnicki, S., Christopher, B., Dreschler, G., Silverman, E., Runnels, B., & Mead, A. (2013). Single-pilot workload management. Poster Presentation at the 84<sup>th</sup> Annual Scientific Meeting of the Aerospace Medical Association, Chicago, Illinois.

Burian, B. K. (2011). Human Performance and Checklist Design Challenges of Aircraft Emergencies. Engineering Psychology Colloquium Invited Master Lecture, Georgia Technology Institute, Atlanta, Georgia.

- Burian, B. K. (2011). Human Performance and Checklist Design Challenges of Aircraft Emergencies. Presentation given at *Aviation Safety Human Factors Conference: Real World Flight Operations Conference and Research Progress*. Dallas, Texas.
- Burian, B. K. (2010). Cognitive and Operational Demands of Flying Technically Advanced Aircraft. Invited Master Lecture Series, Macalester University, Sydney, New South Wales, Australia.
- Burian, B. K. (2010). Aircraft Emergencies: Challenge and Response. Invited Keynote Presentation given at the *9<sup>th</sup> International Symposium of the Australian Aviation Psychology Association*. Sydney, Australia.
- Burian, B. K. (2009). Navigation Reference System Waypoint Study – Phase 1. Presentation at the *December 2009 Meeting of the Communication, Navigation, and Surveillance Task Force*. San Diego, California.
- Burian, B. K. (2009). Integrated Intelligent Flight Deck Project: Focus and Research Review. Presentation given at the *2009 Meeting of the ALPA Human Factors and Training Committee*. Washington, D.C.
- Burian, B. K. (2009). Dynamic Operating Documents for Dynamic Operating Environments. Presentation at the *Human-Computer Interface International 2009 Conference*. San Diego, California.
- Sawyer, M., Burian, B., & Piccone, D. (2009). Human Factors and Safety Management Systems. Presentation given at the *FAA ATO 2009 SMS Summit*. Dallas, Texas.
- Burian, B. K. (2009). Cognitive and Operational Demands of Flying Technologically Advanced Aircraft. Presentation given at *Aviation Safety Human Factors Conference: Real World Flight Operations Conference and Research Progress*. Dallas, Texas.
- Burian, B. K. (2008). Emergency and Off-nominal Situations and NextGen. Presentation given at the *Human Factors and NextGen: The Future of Aviation Conference*, Arlington, Texas.
- Burian, B. K. (2008). Performance Demands in VLJ Operations: The Human Factor. Presentation given at the *Royal Aeronautical Society International Conference on Very Light Jets*. London, England.
- Burian, B. K. (2007). Checklist design to support flight crews during emergencies. Presentation given at the *Abnormal Situations Management 52<sup>nd</sup> Quarterly Meeting*, Richmond, California.

- Burian, B. K. (2007). When things go wrong: Flight crews and emergencies. Presentation given at the *Human Factors in Aviation: Academics and Application Conference*. San Antonio, Texas.
- Burian, B. K. (2007). Emergency and Abnormal Situations in Aviation: Sharing Approaches Across Industries. Presentation at the *Abnormal Situations Management 50<sup>th</sup> Quarterly Meeting*, Phoenix, Arizona.
- Burian, B. K. (2006). Integrated Checklists for Smoke, Fire, and Fumes. Presentation given at the *European Aviation Training Symposium*. Berlin, Germany.
- Burian, B. K. (2006). The Role of Emergency and Abnormal Checklists. Presentation given at the *Department of Defense, Human Factors Technical Advisory Group Meeting*, Monterey, California.
- Burian, B. K., & Dismukes, R. K. (2006). Emergency and Abnormal Situations on the Flight Deck. Invited presentation given for the *311<sup>th</sup> Human Systems Wing, Brooks City-Base*, Brooks City-Base, Texas.
- Burian, B. K. & Geven, R. (2005). *Comparing B737 Aircraft Emergency Checklists*. Presentation given at the 13<sup>th</sup> International Symposium on Aviation Psychology, Oklahoma City, Oklahoma.
- Burian, B. K., Barshi, I., & Dismukes, R. K. (2005). *Center we have a problem: Emergency and abnormal situations in aviation*. Presentation given at the 13<sup>th</sup> International Symposium on Aviation Psychology, Oklahoma City, Oklahoma.
- Burian, B. K. (2005). *Checklists for in-flight smoke, fire, and fumes*. Briefing given to staff of the National Transportation Safety Board. Washington, D.C.
- Burian, B. K. (2005). *Emergency and abnormal situations: In-flight smoke, fire, and fumes*. Presentation given at the Asociacion Sindical de Pilotos Aviadores de Mexico (ASPA)/International Civil Aviation Organization (ICAO) Regional Seminar on Loss of Control in Flight and Upset Recovery Training. Mexico City, Mexico.
- Burian, B. K. (2004). *Emergency and abnormal checklist design factors influencing flight crew response: A case study*. Presentation given at the NASA Human Factors Symposium, NASA Ames Research Center, Moffett Field, California.
- Burian, B. K. (2004). *Challenges in emergency and abnormal checklist design: Smoke and fire checklists*. Presentation given at the Air Line Pilots Association Air Safety Week Forum 2004, Washington, DC.
- Burian, B. K., (2004). *The design of emergency and abnormal checklists: A model*. Presentation given to the ICAO Flight Safety and Human Factors Study Group. Montreal, Quebec, Canada.

- Burian, B. K., Barshi, I., & Dismukes, K. (2004). *The Emergency and abnormal situations project at the NASA Ames Research Center*. Presentation given to the ICAO Flight Safety and Human Factors Study Group. Montreal, Quebec, Canada
- Burian, B. K., Barshi, I., & Dismukes, K. (2004). *Emergency and abnormal situations in aviation: Human factors concerns*. Presentation given to the Advanced Applications Group of ACS Advanced Technologies, Honeywell Laboratories, Minneapolis, MN.
- Burian, B. K., Barshi, I. & Dismukes, K. (2004). Research issues related to aviation emergency and abnormal situations. Presentation given at the Aviation Safety and Security Program, Phase II Planning Meeting, Washington, DC.
- Burian, B. K., Barshi, I., & Dismukes, K. (2004). *Cabin crews in emergency and abnormal situations*. The 21<sup>st</sup> International Aircraft Cabin Safety Symposium. Vancouver, British Columbia, Canada: Southern California Safety Institute.
- Burian, B. K. (2003). *NASA's system-wide accident prevention program: An overview of the training element*. Presentation given to the National Research Council Aviation Safety Program Review Committee, Washington, DC.
- Burian, B. K., Barshi, I., & Dismukes, R. K. (2003). *Emergency and abnormal situations: Aviation and process control industries*. Presentation at the Fall Quarterly Meeting of the Abnormal Situation Management Consortium. Richmond, CA.
- Burian, B. K. (2003). Pilot weather knowledge: A dismal state of affairs. Presentation at the 12<sup>th</sup> International Symposium on Aviation Psychology. Dayton, Ohio: Wright State University Press.
- Burian, B. K., Barshi, I., & Dismukes, R. K. (2003). *Emergency and abnormal situations in aviation: The role of the dispatcher*. Presentation at the meeting of the Airline Dispatchers Federation Symposium. Orlando, Florida.
- Burian, B. K., Dismukes, R. K., & Barshi, I. (2003). *Overview of the emergency and abnormal situations project*. Presentation at the meeting of the Air Line Pilots Association Operations Committee, Air Line Pilots Safety Week Forum. Washington, D. C.
- Burian, B. K., Barshi, I., & Dismukes, R. K. (2003). *The emergency and abnormal situations project at the NASA Ames Research Center*. Presentation at the International Symposium on Emergency and Abnormal Situations in Aviation. Santa Clara, CA.
- Burian, B. K., Barshi, I., & Dismukes, R. K. (2003). *Issues in aeronautical emergency and abnormal situations*. Presentation at the meeting of the Air Transport Association Human Factors Committee, Moffett Field, CA.



- Burian, B. K., Barshi, I., & Dismukes, R. K. (2003). *Emergency and abnormal situations: Focus on training*. Presentation at the meeting of the Air Line Pilots Association Training Council, Moffett Field, CA.
- Burian, B. K., Barshi, I. & Dismukes, R. K. (2001). *An introduction to issues in aviation emergency and abnormal situations*. Presentation given at the Civil Aviation Authority – United Kingdom, Human Factors Division, London, England.
- Burian, B. K., and Barshi, I. (2001). *Issues in emergency and abnormal situations*. Presentation given at the NASA-FAA-Boeing Research and Development in Aviation Joint Meeting, Seattle, Washington.
- Burian, B. K. (1999). *Research issues for general aviation safety training*. Panel presentation at the 10<sup>th</sup> International Symposium on Aviation Psychology. Columbus, Ohio.
- Burian, B. K. (1996). *The Americans with Disabilities Act*. Staff in-service presentation, University of Miami/Jackson Memorial Medical Center, Miami Florida
- Burian, B. K. (1996). *Mental health service accessibility for physically disabled clients*. Staff In-service presentation, University of Tennessee, Knoxville, Tennessee.
- Burian, B. K., & O'Connor Slimp, P. A. (1993). *Dual role relationships: Do they impede an education for the common good?* Presentation at the Annual Meeting of the American College Personnel Association, Kansas City, Missouri.
- Probert, B., Burian, B. K., O'Connor Slimp, P. A., Land, J., Belamy, D., Desmond, F., & Masters, M. (1991). *Campus consultation in the 1990's: A decade of proaction*. Panel Presentation at the Annual Meeting of the American College Personnel Association, Atlanta, Georgia.
- Birkhead, L. J., Burian, B. K., Christiansen, M. D., & Grenard-Moore, S. (1990). *Counselor supervision: Ethical issues in supervisor-supervisee dual relationships*. Panel program at the annual meeting of the American College Personnel Association, St. Louis, Missouri.
- Funderburk, J. & Burian, B. K. (1990). *Working with adults molested as children: Identification, treatment, and recovery*. Program presented as a Continuing Education Seminar for the Gainesville Family Institute, Gainesville, Florida.
- Burian, B. K. (1987). *The impostor phenomenon and college students*. Paper presented at the annual meeting of the American College Personnel Association, Chicago, Illinois.

## **OTHER PROFESSIONAL EXPERIENCE**

1998-1999                      Committee Member, University of Baltimore, Baltimore, Maryland

University of Baltimore-Coppin University Collaborative (Co-Chair)  
 Department of Psychology Curriculum Revision Committee  
 Web-Based Learning Task Force

- 1993-1998      Committee Member, St. Thomas University, Miami, Florida  
 Faculty Senate Executive Committee (Vice Chair)  
 University Strategic Long Range Planning Council  
 Law School Liaison Committee  
 Graduate Student Council  
 Student Disciplinary Committee  
 University Disabled Student Policy Ad Hoc Committee  
 University Bursar Search Committee (Chair)
- 1990-1993      Committee Member, Counseling Center, University of Illinois, Urbana  
 ACOA/Students from Dysfunctional Families Treatment Team (Chair)  
 Crisis Intervention Team  
 Research Advisory Committee  
 Technical Writing Team  
 Paraprofessional Steering Committee  
 Rehabilitation Education Services External Advisory Committee  
 Developmental Outreach and Campus Consultation Area Committee

## CLINICAL EXPERIENCE

- 1994-1998      Licensed Psychologist in Private Practice  
 Pembroke Pines, Florida
- 1989-1990      Team Member  
 Trauma and Death Response Team, University of Florida, Gainesville,  
 Florida
- 1988-1989      Crisis Intervention Counselor  
 Minors Requiring Authoritative Intervention, Jackson County Community  
 Mental Health Center, Carbondale, Illinois
- 1987-1988      Psychological Consultant  
 Illinois Department of Children and Family Services
- 1987-1988      Mental Health Staff Counselor  
 Mental Health Services of Franklin and Williamson Counties, West  
 Frankfort, Illinois

## AFFILIATIONS

American Psychological Association, Applied Experimental Division

Association of Aviation Psychologists  
Human Factors and Ergonomic Society  
Royal Aeronautical Society, Flight Operations Group

**ADDITIONAL LANGUAGES SPOKEN**

American Sign Language